

Risk assessment of PWE Ltd towing connection certifications – 29 March 2018

Background

In August 2017 a drawbeam certified by Peter Wastney of Peter Wastney Engineering Ltd, fitted to an Aratuna Freighters Ltd Iveco Stralis truck, suffered a catastrophic engineering failure near Nelson, causing the heavy trailer it was towing to disconnect and collide with the embankment on the opposite side of the road. This prompted an investigation by the NZ Transport Agency.

To date the Transport Agency has reviewed 20 of 26 certification files uplifted from PWE Ltd.

Three certification files relating to the truck (JWN197) were uplifted immediately following the crash. None of the certification files contained sufficient information or detail to enable a certification decision as required by NZS:5446 to be made, and in the case of the drawbeam (which had failed) failure was actually predicted. An extensive report on this is available detailing that the drawbeam failed at around 4% of its expected life.

A further 14 certification files were subsequently uplifted, these being a "random" selection of other Iveco Stralis drawbeams, other truck drawbeams, and other certification categories. Of these 14 certification files, none contained sufficient information to support a certification decision, and some actually predicted failure. Six of these certifications were revoked based on the contents of the certification files. Two of those six were subsequently scrapped.

The PWE certification file for the replacement drawbeam fitted to JWN197 after the original failure was also reviewed, and was also revoked due to insufficient data in the file. It has since been recertified by another certifier.

Despite PWE Ltd having provided a written assurance that the failed drawbeam fitted to JWN197 was a "one-off" sign, a similarly designed drawbeam certified by him had previously failed on another vehicle [REDACTED]. This was discovered by chance during the investigation.

A further seven certification files relating to a trailer ([REDACTED]) were uplifted in February 2018, due to a driver noticing a crack in the drawbar during a walk-around inspection. The initial report on the drawbar certification file showed that the drawbar design does not meet the required standard (NZS 5446). This prompted the issuing by the Transport Agency of an industry wide safety alert.

The remaining six certification files are not being reviewed in detail at this time; note that some have already expired.

Summary of PWE Ltd files reviewed to date

Total files uplifted:	Number of certifications reviewed:	Files with insufficient information for certification decision:	Number of certifications revoked:
26	20	20	7

Initial Transport Agency Response

The Transport Agency response has been:

- To issue a widely distributed safety alert, including via media
- To advise CoF IOs to be extra vigilant of PWE Ltd certifications
- To write to the individual owners of vehicles with a towing connection certified by PWE Ltd advising the daily walk-around checks should include a closer examination of the towing connections, and the need to have them re-certified.
- To phone the vehicle owners as a follow-up to the letters.
- To implement monitoring and reporting regimes
- To organise additional HVSC resourcing for Nelson/Marlborough/Westcoast area
- To organise site visits by TAD vehicle inspectors commencing 4 Apr 18

Safety Risk

There is a concern that 6 weeks after the issuing of the safety alert, only 26 of the 1502 vehicles have been recorded in Landata as having been recertified. It is recognised that the majority of the affected vehicles are in the Nelson, Marlborough, Tasman and West Coast areas. There are currently only two heavy vehicle specialist certifiers (HVSC) located in this area. Despite having arranged for additional HVSCs to travel from Christchurch to assist, the recertification process is complicated and time consuming.

In response to this low level of recertification's the transport agency needs to reconsider:

- 1) Does the action that the Agency has taken so far provide an assurance that there will not be another catastrophic failure of a PWE Ltd certified towing connection in the near future?
- 2) Has the Transport Agency done all that it should have to mitigate this risk?
- 3) Should we revoke all the towing connection certifications issued by PWE Ltd?

Clearly – the answer to Q1 is No as we can never be sure that another incident won't occur. Q2 requires further analysis, hence this document. S 9(2)(h)

While the likelihood of a further catastrophic failure may be low, the consequence of such an event may be high. Analysis of the recertification inspections carried out to date indicates issues have been discovered with around 30% of the vehicles inspected. While that may change as the sample size increases, this suggests that there may be in the vicinity of 500 vehicles currently operating with towing connections that don't comply with the required standard and present some degree of safety risk.

Revoking all the PWE certifications for the 1500 towing connections identified following the safety alert would cause massive disruption to industry in the top of the South Island. (N.B. revoking the towing connection certification rather than the Certificate of Fitness would allow the trucks/motor caravans to remain in service provided the towing connection was not in use).

S 9(2)(h)

Vehicle Types

Of the 1502 Certifications affected by the Safety Alert, 366 relate to heavy trucks, 324 to heavy trailers and 812 to towbars for towing light trailers. While it may be suggested that the light trailer towbars are lower risk and likely to cover lower mileage, the HVSC engineers have reported that almost all of them have issues requiring either strengthening, reducing tow ratings or removal. Late last year a light trailer disconnected and crashed into another vehicle, fatally injuring the driver and should one disconnect and hit a group of pedestrians the impact would be significant.

Add to this the 324 heavy trucks whose towing connection (drawbeam) may require modification or replacement as part of the recertification process, involving the same engineering resources and the timeframe for remediating this situation increases significantly.

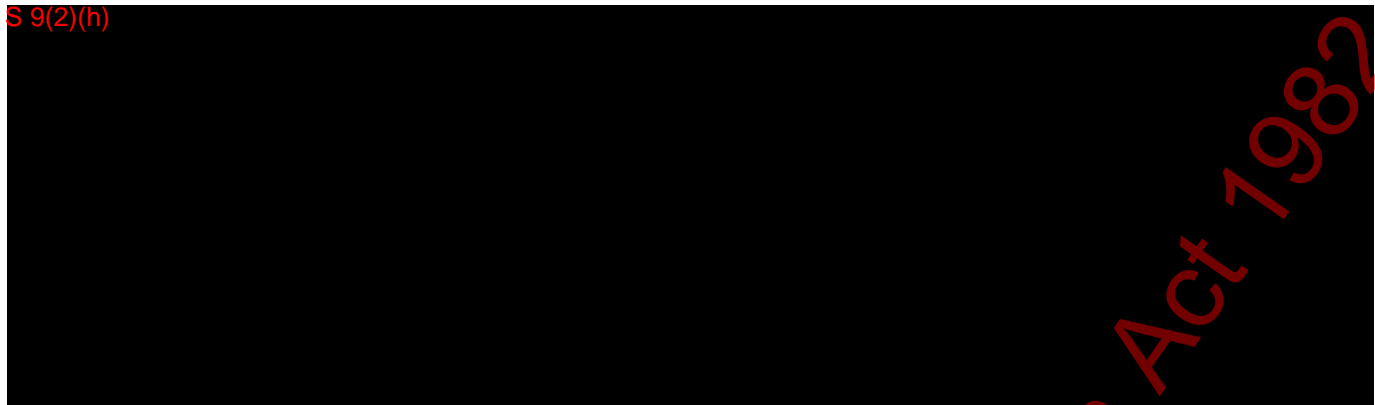
Additionally, there are 812 heavy vehicles fitted with towing connections certified for light (under 3,500kg gross vehicle mass) trailers (towbars) involved as well, and they require the same engineering resources to remediate their situation. Some of these will be motor caravans and some will be smaller heavy vehicles used in town delivery and delivering utility type services.

Revocation

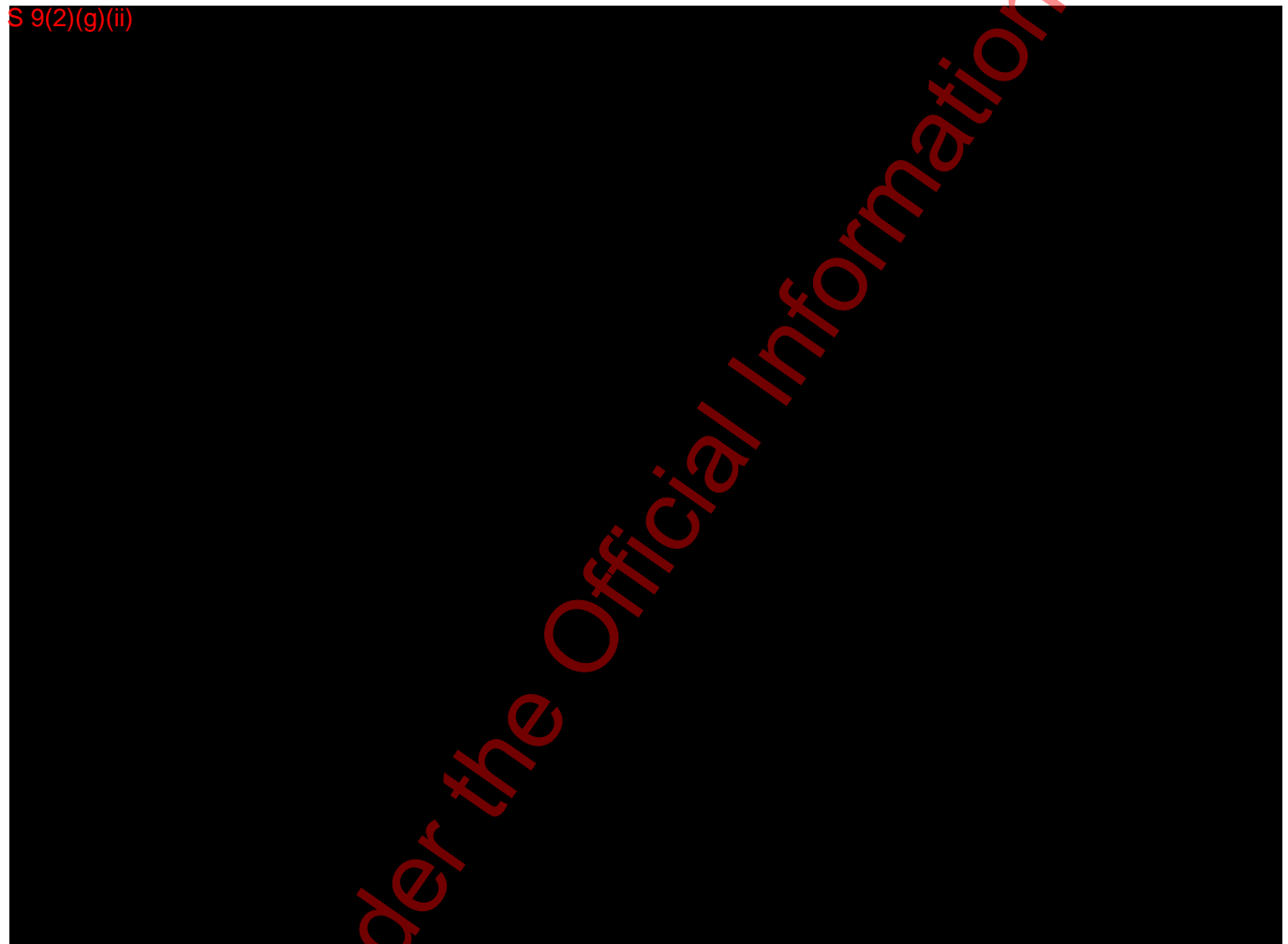
Revoking all the PWE Ltd towing connection certifications would be the ultimate mitigation for the safety risk. This would have the effect of removing all the heavy trailers from service until their towing connection (drawbar) has been recertified. The shortage of engineering capability to remediate the deficient towing connections in the regions primarily impacted as well as the available HVSC to certify them is likely to result in some trailers being out of service for months.

Released under the Official Information Act 1982

S 9(2)(h)



S 9(2)(g)(ii)



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